LOADING AND MAINTENANCE INSTRUCTIONS

The Parker-Hale Volunteer rifle is accompanied by the following accessories

1 bullet mould calibre .451 for casting 485 grain bullet in 99.9% pure lead
1 bullet sizing die and punch
1 .451 calibre wad cutter
1 nipple key
1 spare copper-berillium nipple
3 rear sight blades
2 phosphor bronze cleaning brushes
3 wool mops.

BEFORE USING YOUR P-H VOLUNTEER MUZZLE LOADER

Your rifle has been lightly greased for protection during storage and transit. Wipe down the exterior with a cloth. Dry out the interior of the bore with a cloth patch or mop—use the ramrod (retained by a spring—pull it straight out) with a dry wool mop or wrap a cloth patch round one of the phosphor bronze brushes provided.

Note: We recommend that you have a spare cleaning rod with Enfield type implement thread (Parker-Hale 27AL with ball bearing handle) as this will speed your loading and cleaning procedures. Brass ramrod tips for attachment to the 27AL rod are also available for loading if you prefer to leave the rifle ramrod in place. This is recommended for optimum accuracy—it helps maintain even tension of the barrel bands and ensures that you get the best out of your rifle, which has been carefully factory bedded for accuracy.

PREPARATION OF BULLETS AND WADS

Careful preparation of bullets will pay off in accuracy. Cast bullets from pure lead and for best results, weigh them, discarding those which are light, indicating a large air cavity.

Lubricate by dipping to the top of the cannelures in a mixture of 75% tallow 25% beeswax and leaving to set. The mixture should be melted over a low heat in a flat dish. The mix may have to be adjusted according to ambient

PREPARATION OF BULLETS AND WADS—Continued

temperature. On a hot day more beeswax will be needed to prevent the lubricant melting prematurely.

After lubricating, size the bullets by passing them through the sizing die provided. Press the bullet through, base first, with the top punch supplied and take care not to deform the base in any way. The bullet will now be a perfect fit in the bore, tight and lubricated in the cannelures.

To prepare the over-powder wads, soak an absorbent card of about $\frac{1}{16}$" thickness (such as a beer mat) in the hot bullet lubricant. When the lubricant is set, cut wads with the .451 punch provided.

LOADING AND FIRING

(a) Fire two or three caps only to ensure the nipple channel is clear. N.B. Never snap the hammer without either a percussion cap or snap cap to protect the nipple.

(b) Load a carefully measured charge of powder, preferably weighed exactly. We recommend a charge of between 60 and 90 grains of the *largest* grain rifle powder available such as Fg. Fine grain powders are **not** recommended for best results.

Note: Your Volunteer rifle has a patent breech, an internal powder chamber of smaller diameter than the bore which speeds up the rate of burn of the powder, increases breech pressure and bullet velocity. The rifle will function best if the patent breech is clean and free from fouling, so when carrying out the following loading procedure, take care not to force the mop into the powder chamber, as this will cause the powder to become damp and will push the fouling into the breech.

(c) After loading the powder charge, ram down a waxed wad.

(d) Attach a wool mop to a ramrod and dampen it slightly with water. Lower the ramrod onto the waxed wad, and mark the rod $\frac{1}{4}$" above the point where it exits from the barrel. This is to ensure that when swabbing out the mop is not lowered too far into the powder chamber, the ramrod only being lowered as far as the mark just made.

(e) Insert the bullet carefully, base first, into the muzzle and lower it, with the ramrod, onto the wad. Do not tap the bullet down as this may damage it and upset its aerodynamic performance. Mark the ramrod at the point where it exits from the muzzle and ensure that subsequently each bullet is seated to this depth.

(f) Pull back the hammer to the half cock position and place a cap firmly on the nipple.

LOADING AND FIRING—Continued

(g) When ready to fire, pull back hammer to full cock. To protect the stock during firing it is recommended that adhesive tape be applied to the area immediately round the nipple. Otherwise the wood may be scorched by the flash from the percussion cap.

(h) Fire two bullets to allow the barrel to become uniformly dirty and warm.

(i) Remember the order of loading after firing first shot:

1—swab out with damp wool mop
2—load powder (use long loading tube for best results)
3—waxed wad
4—bullet.

(j) Experiment with the powder load until optimum accuracy is obtained at the range desired.

(k) We have supplied a selection of different height backsight blades so that you can zero your rifle at the range you most frequently use i.e. 100 metres without using the ladder sight.

Note: Small bore muzzle loaders with patent breech develop high breech pressures and eventually the nipple will become eroded, the flash hole enlarged and back pressure of gas may blow the hammer back to half cock on firing. Check regularly the condition of your nipple and fit a new one in good time.

WARNING:

If you forget to load a powder charge or if fouling has built up in the barrel preventing you from seating the bullet against the powder charge DO NOT ATTEMPT TO FIRE THE RIFLE. Firing a rifle with the bullet stuck part way down the bore can seriously damage the barrel. Check the position of the bullet in the barrel with the ramrod. If you have no combination tool extracting stuck bullets, and the bullet has been rammed down until it is seated at the breech, remove the nipple with a nipple wrench and pour a little fine grain black powder into the nipple channel. Replace the nipple tightly, press on a percussion cap and fire, aiming at a safe backstop.

If the bullet remains in the barrel, unscrew the nipple once again, measure a full charge of powder and trickle as much as possible of it into the breech through the nipple channel. Ram the bullet down until it is seated firmly on the powder, replace nipple, place a cap on the nipple and fire in the normal way.

IMPORTANT: If for any reason you are unable to seat the bullet onto the powder do not under any circumstances attempt to fire the rifle. Take it to a gunsmith who will be able to remove the breech plug and drive out the stuck bullet without damage to you or your rifle.

CLEANING INSTRUCTIONS:

Depending upon weather conditions, type of lubricant used and other factors, fouling may build up in the barrel until it becomes difficult to seat the bullet on the powder charge. It is advisable therefore, from time to time to clean the barrel with a phosphor bronze brush followed by the use of a wool mop. These implements are fitted on to the end of the ramrod. After cleaning and before firing the next series, fire a cap or two before loading more powder. Immediately after having finished shooting it is necessary to clean the weapon thoroughly as Black Power residues are corrosive and will ruin the weapon if not removed quickly.

The procedure to be followed is as follows:

(a) Remove barrel bands and, with hammer lowered onto the nipple, unscrew and remove tang screw or "breech nail". Thumb the hammer back to half cock position and remove barrel from stock.

(b) Unscrew nipple with nipple key.

(c) Make a strong, hot solution by adding approximately 1 fl. oz. Young's Black Powder Solvent to a quart of nearly boiling water and clean out the barrel by placing the breech into the solution.

(d) With the ramrod fitted—first with the bronze brush and then with the wool mop—pump the rod up and down the barrel to remove all fouling, ensuring that, by suction, the barrel is filled by the solution.

(e) Rinse out with a fresh mixture of Young's Black Powder Solvent and nearly boiling clean water and leave to dry.

(f) Lightly oil both inside and outside with Young's Black Powder Solvent and refit to stock.

(g) Do not forget to clean the nipple before replacing it.